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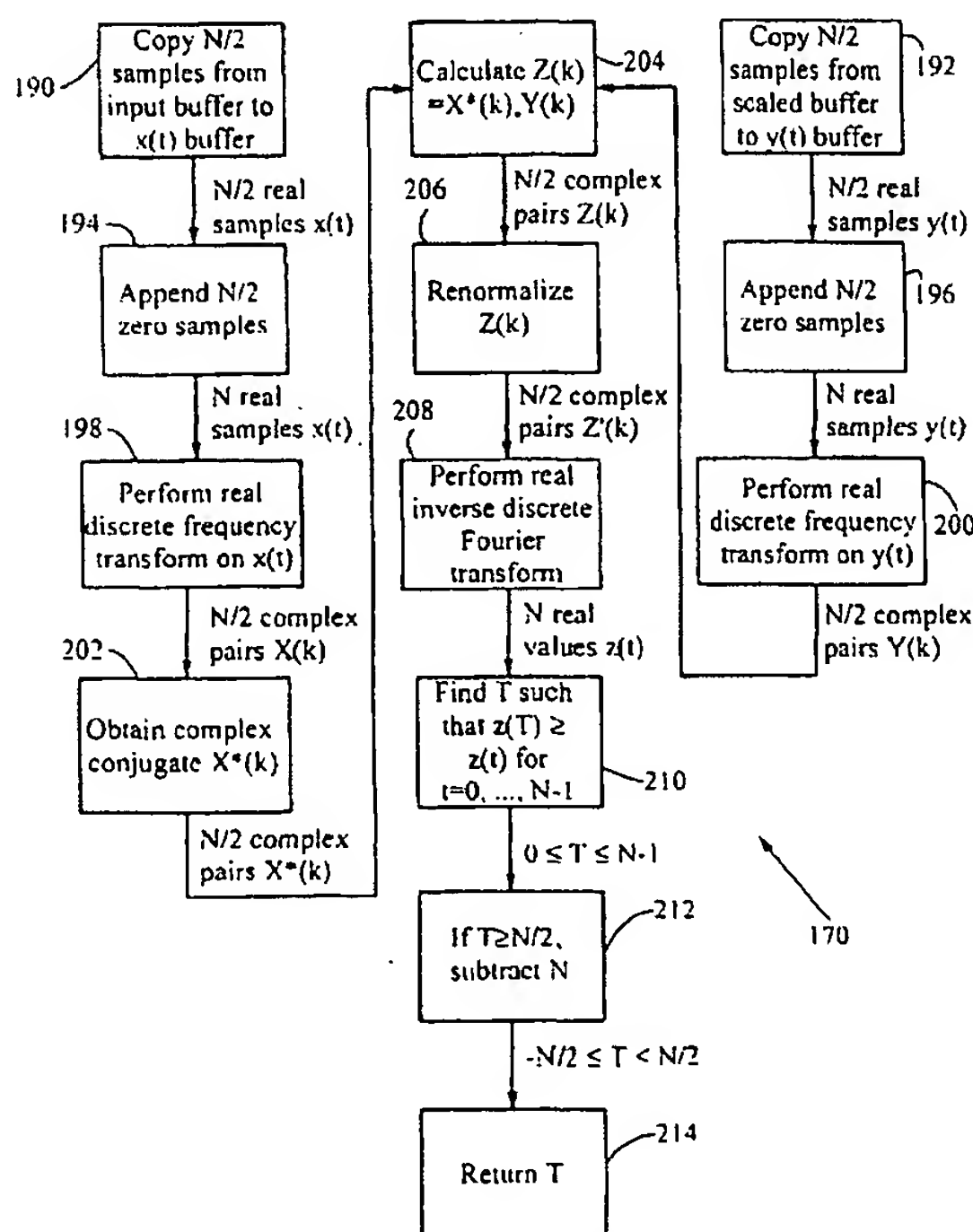
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(54) Title: **CONTINUOUSLY VARIABLE TIME SCALE MODIFICATION OF DIGITAL AUDIO SIGNALS**



(57) Abstract: A time scale modification produces an output signal having a different playback rate but the same pitch as an input digital audio signal. The method overlaps sample blocks in the input signal with sample blocks in the output signal to compress the signal. A correlation function is calculated for each possible overlap, and the overlap producing the highest correlation is chosen. A computationally efficient method for calculating the correlation function computes a discrete frequency transform of the input and output sample blocks, calculates the correlation, and then performs an inverse frequency transform of the correlation function, which has a maximum at the optimal overlap. A method for time scale modification of a multi-channel digital audio signal processes each channel independently. The listener integrates the different channels and perceives a high quality multi-channel signal.

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